

\$		DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR
	\$		

MIDULE setdir

IDENT = 'V04-000'

) =

ADDRESSING\_MODE (EXTERNAL=GENERAL, NONEXTERNAL=LONG\_RELATIVE)

BEGIN

1 .

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FACILITY:

Set Directory Command

ABSTRACT:

This module processes the Set Directory command.

**ENVIRONMENT:** 

Vax native, privileged user mode

AUTHOR:

Gerry Smith

CREATION DATE: 3-Nov-1981

MODIFIED BY:

V03-007 AEW0001

6-Mar-1984 Anne E. Warner

Add error messages to prevent the use of search lists with devices for directories.

FILSPCSRCH - File specification contains a searchlist NOSRCHLST - Command does not support search lists Both are defined in SHRMSG.MSG.

V03-006 GAS0170

Gerry Smith

23-Aug-1983

SETDIR V04-000		I 16 16-Sep-1984 00:59:34 VAX-11 Bliss-32 V4.0- 14-Sep-1984 12:09:06 [CLIUTL.SRC]SETDIR.B3	742 2;1
58 59 60 61 62 63 64 65 66 67 68 69 70	0058 1 ! 0059 1 ! 0060 1 !	Instead of simply doing an IO\$_ACCESS to get the directory's header, perform an actual open, by issuing an IO\$_ACCESS OR IO\$M_ACCESS, to insure proper file locking by the XQP.	
63	0062 1 0063 1	V03-005 GAS0116 Gerry Smith 6-Apr-1983 Use the common qualifier routines.	
66 67 68	0066 1 0067 1 0068 1	V03-004 GAS0112 Gerry Smith 29-Mar-1983 Fix for the new CLI interface, as well as the new command dispatcher.	
	0070 1 0071 1	V03-003 GAS0091 Gerry Smith 19-Oct-1982 Change input request for new CLD syntax.	
73 74 75	0073 1 0074 1 0075 1	V03-002 GAS0026 Gerry Smith 18-Dec-1981 Use shared message file, and lower fatal messages to simple error messages.	
72 73 74 75 76 77 78 79 80	0077 1 0078 1 0079 1	V03-001 GAS0024 Gerry Smith 14-Dec-1981 Fix /LOG logic	
81	0081 1 1**		

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SETDIR V04-000

SETDIR V04-000

16-Sep-1984 00:59:34 VAX-11 Bliss-32 V4.0-742 14-Sep-1984 12:09:06 [CLIUTL.SRC]SETDIR.B32:1 : 83 0082 1 LIBRARY 'SYS\$LIBRARY:LIB'; : 84 0083 1 LIBRARY 'SYS\$LIBRARY:TPAMAC';

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```
K 16
16-Sep-1984 00:59:34
14-Sep-1984 12:09:06
SETDIR
VO4-000
                                                                                                                                                                                                                                      VAX-11 Bliss-32 V4.0-742 CCLIUTL.SRCJSETDIR.B32:1
                                                              FORWARD ROUTINE set$directory : NOVALUE,
                                        Main routine for directory
Get qualifiers and values
Routine to set directory attributes
Routine to get each directory
                                                                         get_quals,
set_attributes,
get_dir;
                                                            EXTERNAL ROUTINE

cli$present,
cli$get_value,
lib$qual_file_parse,
lib$qual_file_match,
lib$file_scan,
check_privilege: NOVALUE,
search_error,
file_error,
parse_uic,
lib$tparse,
lib$cvt_dtb.
                                                                                                                                                                           Determine presence of qualifier
Get value of qualifier
Get common qualifiers
See if directory matches common quals
Routine to get next directory
Routine to check for privilege
Where to go if file search fails
Where to go if file error occurs
Routine for parsing UIC strings
                                                                                                                                                                             Routine for parsing UIC strings
                                                                        lib$cvt_dtb,
sys$fao;
                                                                                                                                                                           Convert decimal to number Formatted ASCII output
                                                                   Declare external data
                                                                         setfile$flags : BITVECTOR[32].
                                                                                                                                                                                                 Qualifier flags word
Owner UIC
                                                                         uic_value,
                                                                                                                                                                                            UIC group number
UIC member number
Version limit
                                                                         group.
                                                                         member.
                                                                         vrsn_value,
                                                                   RMS structures
                                                             Error messages
                                                            EXTERNAL LITERAL
libs filfaimat,
libs quipro,
sets facility,
sets closeerr,
sets entered,
sets enterr,
sets modified,
sets notodir,
sets notods2,
sets readerr,
sets remerr,
sets removed,
sets writeerr;
                                                                                                                                                                            No match for common quals
                                                                                                                                                                           No match for common quals
Quit processing
Facility code
Could not close file
File entered in a directory
Error entering file
File/directory modified
Not a directory
Not an ODS2 structure
Could not read file
Could not remove file
Directory entry removed
                                                                                                                                                                           Directory entry removed Could not write to file
```

context;

Page (3)

VAX-11 Bliss-32 V4.0-742 CCLIUTL.SRCJSETDIR.B32;1

Page (4)

Page

```
SETDIR
VO4-000
                                                                                                                       VAX-11 Bliss-32 V4.0-742 CCLIUTL.SRCJSETDIR.B32:1
                                                                                                                                                                        Page
   25555555901234567890123775
255555555678901234567890123775
                                   Get the command qualifiers.
                                IF NOT get quals()
THEN RETURN;
                                   For each directory specified, find the directory and perform the
                                   operations requested.
                                $init_dyndesc(dir_desc);
file_fab[fab$l_ctx] = false;
                                                                                       ! Make the descriptor dynamic ! Initialize for get_dir routine
                                WHILE get_dir(dir_desc)
DO
                                      BEGIN
Lib$file_scan(
                                                                                         For each directory found Use this fab Go here if directory found Or here if error
                                                         file_fab.
set_attributes,
                                                         search_error)
                                      END:
                                RETURN:
                                END:
                                                                                                               SETDIR
\V04-000\
                                                                                                    .TITLE
                                                                                                     .PSECT
                                                                                                               _LIB$STATE$, NOWRT, SHR, PIC,1
                                                                                  00000 DIR_STATE::
                                                                                  00000 DIRSTART:
                                                                                                               0
                                                                                                      BLKB
                                                                                 00000 : TPASTYPE
                                                                         45F4
                                                                                                      WORD
                                                                                                               17908
                                                                    00000000 00002 :TPA$ADDR
                                                                                                     LONG
                                                                                                               <<GROUP-U.3>-4>
                                                                                 00006 ; TPASTYPE
                                                                          042C
                                                                                                      WORD
                                                                                                               1068
                                                                                         TPASTYPE
                                                                                 80000
                                                                          55F4
                                                                                                      WORD
                                                                                                               22004
                                                                    A0000 *000000
                                                                                          : TPASADDR
                                                                                 0000E :TPASTARGET U.7: .WORD
                                                                                                               <<MEMBER-U.6>-4>
                                                                         FFFF
                                                                                                     .PSECT
                                                                                                               _LIB$KEYO$, NOWRT, SHR, PIC.1
                                                                                  00000 DIR_KEYS::
                                                                                                               0
                                                                                 00000 ; TPASKEYO
                                                                                                     .BLKB
                                                                                                     .PSECT SOWNS, NOEXE, 2
```

0000000G

```
16-Sep-1984 00:59:34
14-Sep-1984 12:09:06
                                                                                     VAX-11 Bliss-32 V4.0-742 [CLIUTL.SRC]SETDIR.B32;1
                                                                                                                                                                                 (5)
                      00000 FILE_RLF:
                                                     BYTE
BYTE
BYTE
                                                                       N90000
                      00001
00002
00003
00004
00008
00009
0000A
0000B
00001
00014
00024
0002A
00030
00034
                                                      LONG
BYTE
BYTE
BYTE
BYTE
00000000
                                                     LONG
LONG
WORD
00000000
        0000#
         0000#
                                                      . WORD
00000000
                                                      LONG
             00000000000
                                                      BYTE.
                      00039
                      0003A
0003B
0003C
0003D
                                                      .BYTE
                                                      .BYTE
                                                      .BYTE
                                                      .BYTE
                      0003E
                                                      .BYTE
                                                                        0[2]
                      00040
00044
00048
0004C
00000000
                                                      -LONG
00000000
00000000
00000000
                                                      . LONG
                                                      . LONG
                                                      .LONG
0000000
                      00050
                                                      .LONG
00000000
                      00054
                                                      . LONG
00000000#
                      00058
                                                      . LONG
                                                                        0[5]
                      00060 CONTEXT: BLKB
                                                                      CLISPRESENT, CLISGET_VALUE
LIBSQUAL_FILE_PARSE
LIBSQUAL_FILE_MATCH
LIBSFILE_SCAN, CHECK_PRIVILEGE
SEARCH_ERROR, FILE_ERROR
PARSE_UIC, LIBSTPARSE
LIBSCVT_DTB, SYSSFAO
SETFILESFLAGS, UIC VALUE
GROUP, MEMBER, VRSN_VALUE
FILE_RESULT, FILE_EXPANDED
FILE_NAM, FILE_FAB
LIBS_FILFAIMAT, LIBS_QUIPRO
SETS_FACILITY, SETS_CLOSEERR
SETS_MODIFIED, SETS_NOTDIR
SETS_NOTODS2, SETS_READERR
SETS_REMERR, SETS_REMOVED
SETS_WRITEERR
                                                      .EXTRN
                                                      .PSECT
                                                                       $CODE$, NOWRT, 2
                                                     ENTRY
SUBL2
CALLS
                                                                                                                                                                              0191
                                                                       SETSDIRECTORY, Save nothing #12, SP
                                                                                                                                                                              0230
                                                                       #O, CHECK_PRIVILEGE
```

SETDIR V04-000			E 1 16-Sep-1984 00:59:34 VAX-11 Bliss-32 V4.0-742 14-Sep-1984 12:09:06 [CLIUTL.SRC]SETDIR.B32;1	Page 10 (5)
	04 A	00000000° NE 01ff 04	F 9F 0000C PUSHAB CONTEXT BF 3C 00012 MOVZWL #511, 4(SP) AE 9F 00018 PUSHAB 4(SP)	: 0235 : 0242 : 0235
	000000006	00	OZ FB 0001B CALLS #Z LIB\$QUAL_FILE_PARSE	0235 0245 0246
	000000006 0	00	00 DD 00025 PUSHL STATUS 01 FB 00027 CALLS #1, LIB\$SIGNAL 04 0002E RET	0246
	00000000V	F 9	00 FB 0002F 18: CALLS #0, GET_QUALS	0251
	04	020E0000 08 00000000	MOVL #34471936, DIR_DESC NE D4 00041 CLRL DIR_DESC+4	0258
	00000000v	00000000G 04 B	00	0259 0261
		00000000G 00000000V 00000000G	TO TO TO TO THE TOTAL SEL MINIBULES	0264
	00000000G 0	00000000	00 9F 00063 PUSHAB FILE FAB 03 FB 00069 CALLS #3, EIB\$FILE_SCAN 08 11 00070 BRB 2\$ 04 00072 3\$: RET	0263 0271

; Routine Size: 115 bytes, Routine Base: \$CODE\$ + 0000

```
VAX-11 Bliss-32 V4.0-742 [CLIUTL.SRC]SETDIR.832;1
                       ROUTINE get_quals =
This routine interrogates the CLI for qualifiers and values. If an
                          error occurs, it is signaled and control is returned with a value of
                         FALSE.
                       BEGIN
                       LOCAL
                            status,
desc : $BBLOCK[dsc$c_s_bln];
                                                                             ! General descriptor
                       $init_dyndesc(desc);
                                                                             ! Make it dynamic
                          Get the simple flags first.
                        setfile$flags[qual_log] = cli$present(%ASCID 'LOG');
                         /OWNER_UIC
                       If cli%present(%ASCID 'OWNER_UIC')
                       THEN
                           BEGIN
setfile$flags[qual_owner] = 1;
                                                                             ! If present, set bit
                         If no value on /OWNER_UIC, then call GETJPI to get this process's UIC.
                            IF NOT cli$get_value(%ASCID 'OWNER_UIC', desc)
                            THEN
                                BEGIN
              0306
0307
0308
0309
0310
0311
0312
                                LOCAL
                                iosb : VECTOR[4,WORD];
status = $GETJPIW(ITMLST = UPLIT(WORD(4,jpi$_uic),
                                                                     uic_value,
314
315
                                                      10SB = iosb);
                                 If .status
                                 THEN status = .iosb[0];
                                 IF NOT .status
                                 THEN
                                     BEGIN
                                     SIGNAL (.status);
                                     RETURN false:
                                     END:
                                 END
                          Otherwise, assume a real UIC. Parse the string.
                            ELSE
                                 BEGIN
                                 If NOT (status = parse_uic(desc, uic_value))
                                 THEN
```

```
16-Sep-1984 00:59:34
14-Sep-1984 12:09:06
                                                                                  VAX-11 Bliss-32 V4.0-742
[CLIUTL.SRC]SETDIR.B32;1
                                                                                                                                       (6)
               BEGIN
SIGNAL(set$_syntax, 1, desc);
RETURN false;
               END:
          END:
     END:
  Now for the version limit.
IF clispresent(%ASCID 'VERSION_LIMIT')
THEN
    BEGIN
setfile$flags[qual_vrsn] = 1;
vrsn_value = 32767;
                                                                Show that /VERSION specified
                                                                Set to the default
     IF clisget_value(%ASCID 'VERSION_LIMIT', desc)
     THEN
          vrsn_value)
          THEN
               BEGIN
               SIGNAL(set$_syntax, 1, desc);
RETURN false;
               END:
          IF .vrsn_value LSS 0 OR .vrsn_value GTR 65535
          THEN (SIGNAL(set$_valerr); RETURN false);
          END:
     END:
RETURN true;
END:
                                                                 .PSECT $PLIT$, NOWRT, NOEXE, 2
                                              00000 P.AAB:
                                                                          \L0G\<0>
17694723
                                                                 .ASCII
                                                     P.AAA:
                                 010E0003
                                               00004
                                                                 -LONG
                                 00000000
                                               00008
                                                                 ADDRESS P. AAB
                                               0000C
                                                      P.AAD:
                                                                          \DWNER_UIC\<0><0><0>
17694729
                                                                 _ASCII
                                 010E0009
00000000
57 4F
                                              00018
00010
00020
                                                      P.AAC:
                                                                 . LONG
                                                                 ADDRESS P.AAD
                                                                .ASCII \OWNER UIC\<0><0><0>
.LONG 17694729
                                                      P.AAF:
                                 010E0009
00000000
                                                      P.AAE:
                                              00030
00034
00038
0003C
                                                                 ADDRESS P.AAF
WORD 4, 772
                               0304 0004
                                                      P.AAG:
                                                                 . WORD
                                 000000000
                                                                ADDRESS UIC VALUE
                     00000000
                                                                 . LONG
                                               00044
                                                                          VERSION_LIMIT\<0><0><0>
                                                      P.AAI:
                                                                 .ASCII
                                 010E0000
00000000
45 56
                                              00054
00058
0005C
                                                      P.AAH:
                                                                . LONG
                                                                          17694733
```

00068

.ADDRESS P.AAI

.ASCII \VERSION\_LIMIT\<0><0><0>

SETDIR

35557890125446789012545678901253665

						84 00:59 84 12:09		VAX-11 Bliss-32 V4.0-742 [CLIUTL.SRC]SETDIR.B32;1	Page 13 (6)
		80	000000°	0006C 00070	P.AAJ:	.LONG .ADDRES	1769 S P.A	4733 AK	•
						.EXTRN	SYSS	GETJPIW	
						.PSECT	\$COD	E\$,NOWRT,2	
64	08	57 000000006 56 000000006 55 000000006 53 000000006 52 00000000° 5E 020E0000 0C 63 02 14 63 42 64 08 28 66 20	9E 000 9E 000 9E 000 9E 100 9E 10	00002 00009 00010 00017 0001E 00025 0002F 00037 0003A 0003F 00044 00040 00040 00050	GET_QUA	MOVAB MOVAB MOVAB MOVAB MOVAB MOVAB SUBL2 MOVAL CLRL PUSHAL CALLS INSV PUSHAB CALLS BLBC BISB2 PUSHAB CALLS BLBC PUSHAB CALLS	VRSNFCLIS VRSNFCLIS P1644 DES W10-AA P10-AA R0-SP R0-SP	CLISPRESENT #2, #1, SETFILESFLAGS CLISPRESENT 38 SETFILESFLAGS E CLISGET_VALUE 28	0272 0286 0291 0296 0299 0303
	0000000G	08 30 00 06 50 17	7E 7C 7E D4 07 FB 50 E9 6E 3C 50 E8 50 DD		1\$:	PUSHAB CLRQ CLRL CALLS BLBC MOVZWL BLBS PUSHL	IOSB P.AA -(SP -(SP #7, STATI IOSB STATI	) SYS\$GETJPIW US, 1\$ , STATUS US, 3\$ US	0313 0314 0315 0318
		00000000G	00 9F	00070	28:	PUSHAB	UIC	VALUE	0327
	000000006	00 30	02 FB 50 E9 A2 9F	00085 0008C 0008F 00092	38:	CALLS BLBC PUSHAB CALLS	M2 STATI P.AA	PARSE_UIC US, 45 H CLISPRESENT	0339
		63 50 64 65 7FFF 08 68	01 FB 50 E9 10 88 8F 3C AE 9F 02 FB 55 DD AE DD AE 3C 03 FB	00098 00098 000A0 000A3		BISB2 MOVZWL PUSHAB PUSHAB	#16, #327 DESC P.AA	VALUE  PARSE_UIC US, 48 H CLISPRESENT 85 SETFILESFLAGS 67, VRSN_VALUE J CLISGET_VALUE	0342 0343 0344
	00000000G	66 3C 7E 10	50 E9 55 DD AE DD AE 3C 03 FB	000A9 000AC 000AE 000B1 000B5		BRB PUSHAB PUSHAB CALLS BLBC PUSHAB CALLS BLBC B1SB2 MOVZWL PUSHAB PUSHAB CALLS BLBC PUSHL PUSHL MOVZWL CALLS	RO.	CLISGET_VALUE 8\$ +4 -(SP) LIBSCVT_DTB	0347 0348 0347

SETDIR V04-000			I 1 16-Sep-1984 00:59:34 VAX-11 Bliss-32 V4.0-742 14-Sep-1984 12:09:06 [CLIUTL.SRC]SETDIR.B32;1	Page 14 (6)
	0000FFF	10 08 007710FA 67 50 8F	50 E8 000BC AE 9F 000BF 48: PUSHAB DESC 01 DD 000C2 BF DD 000C4 O3 FB 000CA 1D 11 000CD BRB 9\$ 65 DO 000CF 58: MOVI VRSN VALUE RO	0352 0353 0355 0356
:		67 007711EA	09 19 00002 BLSS 6\$ 50 D1 000D4 CMPL R0, #65535 0B 15 000DB BLEQ 8\$ 8F DD 000DD 6\$: PUSHL #7803370 01 FB 000E3 7\$: CALLS #1 LIB\$SIGNAL 04 11 000E6 BRB 92 01 D0 000E8 8\$: MOVL #1, R0	0357
· · · · · · · · · · · · · · · · · · ·		50	01 D0 000E8 8\$: MOVL #1, R0 04 000EB RET 50 D4 000EC 9\$: CLRL R0 04 000EE RET	0361 0362

; Routine Size: 239 bytes, Routine Base: \$CODE\$ + 0073

```
ROUTINE set_attributes (fab) =
This is the routine that accesses the directory and sets the specified attributes. If an error occurs while attempting to set the attributes, a message telling the user is issued, and any other
                               directories are processed.
                            BEGIN
                                  fab : REF $BBLOCK;
                                                                                   ! Define the fab
                            LOCAL
                                  atr : BLOCKVECTOR[3,8,8YTE],
                                                                                     Attribute control block
                                                                                     Pointer to attribute block
                                 ptr,
status,
                                                                                     Status return
                                  channel : WORD
                                                                                     Channel number
                                 desc: $BBLOCK[dsc$c_s_bln],
dir_desc: $BBLOCK[dsc$c_s_bln],
string: VECTOR[nam$c_maxrss_BYTE],
fib: $BBLOCK[fib$c_extdata],
header: $BBLOCK[512],
                                                                                                General descriptor
                                                                                     Descriptor for directory
                                                                                     String to build directory
A FIB for the QIO
                                                                                     The file header
                                  iosb : VECTOR[4.WORD];
                                                                                     1/0 status block
                 0388
0389
0390
0391
                                  recattr = header[fh2$w_recattr] : $BBLOCK[atr$s_recattr],
                 0392
                                  nam = .fab[fab$l_nam] : $BBLOCK;
                                                                                  ! Define the name block
                 0394
0395
                             If .setfile$flags[qual_quit]
                            THEN RETURN true:
                 0396
0397
0398
0399
                               Build a descriptor to point to the directory.
                 0400
0401
0402
0403
0404
0405
0406
0407
0408
0410
0411
0412
0413
0414
0415
0416
                            CH$MOVE(.nam[nam$b_rsl],
                                                                                                Move this many characters
                                                                                                from the nam
                                        .nam[nam$l_rsa],
                                       string);
                                                                                                To the temp string
                                                                                                Point to the string
                            dir_desc[dsc$a_pointer] = string;
                                                                                                Fill in the size
                            dir_desc[dsc$w_length] = .nam[nam$b_rsl];
                               Move the final bracket over, to get the name of the final directory
414
                             string[,nam[nam$b_dev]
                                      + .nam[nam$b_dir]
416
                                      + .nam[nam$b_name]] = .string[.nam[nam$b_dev]
                                                                              nam[nam$b_dir]
i];
418
419
420
421
423
423
424
                            string[.nam[nam$b_dev] + .nam[nam$b_dir] - 1] = '.';
                                                                                 ! Replace bracket with dot
                            dir_desc[dsc$w_length] = .nam[nam$b_dev]
                                                             + .nam[nam$6_dir]
+ .nam[nam$6_name] + 1; ! Update string length
                                   the directory looks like [000000.something], get rid of the leading
```

```
VAX-11 Bliss-32 V4.0-742
ECLIUTL.SRCJSETDIR.B32;1
                          zeroes and dot.
NOT CHSFAIL(status = CHSFIND_SUB(.dir_desc[dsc$w_length],
                                                                   .dir_desc[dsc$a_pointer],
                                                                  UPLIT('000000')))
                        THEN
                             BEGIN
               0429
0431
0433
0433
0435
0436
0437
0438
0441
0442
                             CH$MOVE(.dir_desc[dsc$w_length] - (.status + 7 - .dir_desc[dsc$a_pointer]),
                                      .status + 7.
                                       status);
                             dir_desc[dsc$w_length] = .dir_desc[dsc$w_length] - 7;
END;
                          Check to see if this directory file matches the requested qualifiers
                        status = lib$qual_file_match(context,
                                                                                  Call the common qualifier routine
                                                                                ! fab for directory
                                                           fab.
                                                          MASCID 'Modify !AS? [N]: ',
                                                          #REF(dir_desc));
               IF NOT .status
                                                                         If the status is false, check what kind of "error"
                        THEN
                             BEGIN
                                .status EQL libs_filfaimat
                                                                       ! If no match, return
                             THEN RETURN true
                             ELSE IF .status EQL libs quipro THEN
                                                                       ! If quit-right now,
                                  BEGIN
458
                                  setfile$flags[qual_quit] = 1;
                                                                       set a flag
and leave
                                  RETURN true:
460
                                  END
461
462
463
464
465
466
467
471
476
476
477
478
                             ELSE
                                                                       ! For any other error,
                                  BEGIN
                                  SIGNAL (.status);
                                                                         signal it and
                                  RETURN true:
                                                                       go away
                                  END:
                             END:
                           Assign a channel to the file's device
                         desc[dsc$w_length] = .nam[nam$b_dev];
                                                                         Set up the descriptor
                        desc[dsc$a_pointer] = .nam[nam$[_dev];
                                                                       ! to point to the device name
                         IF NOT (status = $ASSIGN(
                                                    DEVNAM = desc.
                                                    CHAN = channe())
                        THEN
                             file_error( set$_openin,
480
481
482
                                           .status, .fab);
                                                                         Tell user why the assign failed
                             RETURN true:
                                                                         And continue with other files
                             END;
```

16-Sep-1984 00:59:34 14-Sep-1984 12:09:06

\$14 \$15 \$16 \$17

\$19012345 \$19012345 \$26789 \$19012345 \$19012345 \$190123 \$190123 \$19

```
Access the directory, reading its header
            desc[dsc$w_length] = fib$c_extdata;
desc[dsc$a_pointer] = fib;
                                                                       ! Re-use descriptor to point to fIB
            CHSFILL(0,fibSc_extdata,fib):
                                                                       ! Zero out the FIB
            fib[fib$l_acctl] = fib$m_write OR
0486
0487
0488
0489
0490
0491
0493
0494
0495
0496
0497
0500
0501
0502
                                                                       ! Set up the FIB
                                        fibsm_noread OR fibsm_nowrite;
            fib[fib$w_fid_num] = .nam[nam$w_fid_num];
fib[fib$w_fid_seq] = .nam[nam$w_fid_seq];
fib[fib$w_fid_rvn] = .nam[nam$w_fid_rvn];
                                                                                   ! Put in the file id
            atr[0,atr%w_type] = atr%c_header;
atr[0,atr%w_size] = atr%s_header;
atr[0,atr%l_addr] = header;
atr[1,0,0,32,0] = 0;
                                                                                   ! Get the file header
            status = $010W( CHAN = .channel,

FUNC = IOS_ACCESS OR IOSM_ACCESS,

10SB = iosB,
                                                                                   ! Access the file, reading
                                                                                              ! the file header
                                    P1 = desc.
                                    P5 = atr);
                .status THEN status = .iosb[0];
            If NOT .status
THEN file_error(set$_readerr,.status,.fab)
                                                                                     If there was an error,
                                                                                   ! tell the user what it was
            ELSE
                  BEGIN
               Check to see that this is a directory file. This check is only good for an ODS2 volume.
                  IF .header[fh2$b_struclev] EQL 2
AND NOT .header[fh2$v_directory]
                  THEN
                        BEGIN
                        desc[dsc$w_length] = .nam[nam$b_rsl];
desc[dsc$a_pointer] = .nam[nam$l_rsa];
SIGNAL (set$_writeerr,
                                                                                               ! Error writing to
                                   desc, set$_notdir);
                                                                                               ! This file
                                                                                               for this reason
                        END
                  ELSE
                        BEGIN
               See what qualifiers were set. Build the attribute control blook
                        ptr = 0:
                                                                       ! Nothing on control block
                        If .setfile$flags[qual_vrsn]
                        THEN
```

```
VAX-11 Bliss-32 V4.0-742
[CLIUTL.SRC]SETDIR.832;1
                                                   BEGIN
Change the version limit for the directory
                                                   atr[0,atr$w_type] = atr$c_recattr;
atr[0,atr$w_size] = atr$s_recattr;
atr[0,atr$l_addr] = recattr;
recattr[fat$w_versions] = .vrsn_value;
ptr = .ptr + 1;
END;
                                                                                                                       ! Update the pointer
                                             If .setfile$flags[qual_owner]
THEN
                                                   BEGIN
                                   Change the owner uic
                                                   atr[.ptr.atr$w_type] = atr$c_uic;
atr[.ptr.atr$w_size] = atr$s_uic;
atr[.ptr.atr$l_addr] = uic_value;
ptr = .ptr + 1;
                                                                                                                       ! Update the pointer
                                                   END:
                                   Look to see if the pointer has been changed. If yes, modify the header.
                                             IF .ptr NEQ 0 THEN
                                                   BEGIN
                                                  atr[.ptr,0.0.32.0] = 0;
status = $010W( CHAN = .channel,
FUNC = IOS MODIFY,
                                                                                                              Put a zero at end of list
                                                                                                              Make the modifications
                                                                            10SB = iosb.
                                                                            P1 = desc.
P5 = atr);
                                                   If .status THEN status = .iosb[0];
If NOT .status ! If th
THEN file_error(set$_writeerr,.status,.fab)
                                                                                                           ! If the modify failed, tell user
                                                   ELSE
                                                   IF .setfile$flags[qual_log]
  THEN SIGNAL(set$_modified,1,dir_desc);
$010W(CHAN = .channel,
        FUNC = IO$_DEACCESS,
                                                                                                                       ! If /LOG, tell user
                                                                                                                       ! Deaccess the file
                                                             105B = 1056,
                                                            P1 = desc);
                                                   END:
                                                                                                              End of header modify
                                            END:
                                                                                                           ! End of qualifier scan
                                   Deassign the channel
                                       IF NOT (status = $DASSGN(CHAN = .channel))
                                       THEN file_error(set$_closeerr, .status, .fab);
                                       END:
                                 RETURN true;
                                END:
```

SETD1R V04-000	N 1 16-Sep-1984 00:59:34 14-Sep-1984 12:09:06
	•

VAX-11 Bliss-32 V4.0-742 CCLIUTL.SRCJSETDIR.832;1

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				_												.PSECT	SPLITS, NOWRT, NOEXE, 2	
5D	4E	58	20	3f	53	41	00 21	20	30 79	30 66 00	30 3 69 6 00 0	0 30 6 6F 0 20	30 40 3A	00074 0007C	P.AAL: P.AAN:	.ASCII	\000000\<0><0> \Modify !AS? [N]: \<0><0><0>	
										00	00 0	010E	0011 0000	00074 0007C 0008B 00090 00094	P.AAM:	.LONG	17694737	
																.EXTRN	SYSSASSIGN, SYSSOIOW SYSSDASSGN	
																.PSECT	SCODES, NOWRT, 2	
									4	5B 5A 59	0000000 0000000 0000000	0G 00 0G 00 0G 00		00002	SET_ATT	MOVAB MOVAB MOVAB MOVAB MOVAB	Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11 SYS\$QIOW, R11 LIB\$SIGNAL, R10 SETFILE\$FLAGS, R9 -856(SP), SP FAB, R8 40(R8), R6 #1, SETFILE\$FLAGS, 18 19\$	0363
										5É	FCA	B (1	96	00017		MOVAB	-856(SP), SP	0392
						03				56 69	0	023	9 DO	00020		MOVL BBC	40(R8), R6 #1, SETFILESFLAGS, 18	0394
									. (	50	0	0231 3 A	D YA	00028 0002B	15:	BRU	19\$ 3(R6), RO	0400
					FED8	CD		Di Di		50 B6 AD AD 50	FED 0 3	B CI	0 28 0 98 6 98 6 94	0003C 00041 00045		MOVC3 MOVAB MOVZBU MOVZBL MOVZBL ADDL2 MOVZBL ADDL2	3(R6), R0 R0, a4(R6), STRING STRING, DIR DESC+4 3(R6), DIR DESC 57(R6), R0 58(R6), R1	0403 0404 0409
										50 51	36	B A		0004C		MOVZBL	58(R6), R1 R1, R0 59(R6), R1	0410
		)(	BD		D8 D8	AD AD		FED FED		41 40 51 EF	FED	7 CD4(	0 90 E 90 1 A1 6 39	00050 00053 00050 00062 00067		MOVB ADDW3 MATCHC	RO, R1 STRING-1[RO], STRING[R1] #46, STRING-1[RO] #1, R1, DIR DESC #6, P.AAL, BIR_DESC, addr_desc+4	0414 0417 0425
										53 53 57		000	6 DO	00074 00077 0007A	2\$:	MOVL SUBL 2 MOVAL	2\$ #6, R3 #2, R3 -(R3), STATUS	
						50	)	D	0	AD 51 50	0.			0007b 0007f 00084 00088		SUAL3 MOVŽUL ADDL2	STATUS, DIR DESC+4, RO DIR DESC, RT R1, RO	0429
						67		0	7	50 53 A3 AD 6E	D	550	7 C2 7 D0 0 28 7 A2	0008B 0008E 00091	38:	BEQL MOVL SUBL2 MOVAL BF2L SURL3 MOVZWL ADDL2 SUBL2 MOVL MOVC3 SUBW2 MOVAB PUSHAB CLRL PUSHAB	-(R3), STATUS 38 STATUS, DIR_DESC+4, RO DIR_DESC, RT R1, R0 W7, R0 STATUS, R3 R0, 7(R3), (STATUS) W7, DIR_DESC DIR_DESC, (SP) SP P.AAM -(SP)	0430 0431 0432 0442
											0000000	7	F D4	0009E 000A0 000A6 000A8		PUSHL PUSHAB CLRL PUSHL PUSHAB	SP P.AAM -(SP) R8 CONTEXT	0440 0438 0439 0438

				16-Sep- 14-Sep-	1984 00:59 1984 12:09	:34 VAX-11 Bliss-32 V4.0-742 :06 [CLIUTL.SRC]SETDIR.B32;1	Page 20 (7)
	000000006	90	05	FB 000B0	CALLS	#5, LIBSQUAL_FILE_MATCH RD, STATUS STATUS, 6\$	•
	000000006	1F 8F	57 57	FB 000B0 D0 000B7 E8 000BA D1 000BD 13 000C4 D1 000C6 12 000CD 88 000CF 11 000D2 DD 000D4 FB 000D6 31 000D9 FB 000EB FB 000EB FB 000EB FB 000FB DD 000FB	BLBS CMPL BEQL	STATUS, 6\$ STATUS, #LIBS_FILFAIMAT	0444 0447
	000000006	8F	13 57	13 000C4 D1 000C6	CMPL	STATUS, #LIB\$ QUIPRO	0449
		69	05 02 05 57	12 000CD 88 000CF 11 000D2	BNEQ BISB2	#2, SETFILESFLAGS	0452 0453
		6A	57 01	DD 00004 48:	BRB PUSHL	STATUS	0453
	EO		0180	FB 00006 31 00009 5\$: 9B 0000C 6\$: D0 000E1 7C 000E6 9F 000E8 9F 000EB	CALLS BRW MOVZBW	#1, LIB\$SIGNAL 19\$ 57(R6) DESC	0458 0465
	E0 E4		39 A6 14 A6 7E	00 000E1 7C 000E6	MOVL	57(R6), DESC 68(R6), DESC+4 -(SP)	0466 0470
			C AE	9F 000E8 9F 000EB	CLRQ PUSHAB PUSHAB	CHANNEL	
	000000006	00 57	0C AE 0 AD 04 50 57 57	FB 000EE 00 000F5	MOVL	#4. SYS\$ASSIGN RO. STATUS STATUS. 7\$ STATUS(SP) #7803034	
		0B 7E 007710	57	E8 000F8 7D 000FB DD 000FE 11 00104	BLBS	STATUS, -(SP)	0474
	FO	AD	69 20	11 00104 BO 00106 75:	PUSHL BRB MOVW	73	0473
20	00 E4	AD FEI	00 88	9E 0010A 2C 00110	MOVAB MOVC5	#32, DESC FIB, DESC+4 #0, (SP), #0, #32, FIB	0482
	FEB8	FEI	8 CD	00115	MOVZWL	#1281, FIB 36(R6), FIB+4	0487
	FEBC FECO EB EC	CD 05	4 A6	DO 0011F BO 00125	MOVL	36(R6), FIB+4 40(R6), FIB+8 #655872, ATR	0490
	EC	AD 000A02	24 A6 28 A6 30 8F 30 AE 30 AD	3C 00118 D0 0011F B0 00125 D0 0012B 9E 00133 D4 00138	MOVAB	HEADER, AIR+4	0495 0496
			7E 8 AD	04 0013B 9F 0013D	CLRL CLRL PUSHAB	ATR+8 -(SP) ATR	0497
			7.5	7C 00140 D4 00142 9F 00144	CLRQ CLRL PUSHAB	-(SP) -(SP) DESC -(SP) 10SB #114, -(SP)	1
			O AD 7E	9F 00144 7C 00147 9F 00149	PUSHAB CLRQ PUSHAB	DESC -(SP)	
		7E 7E	7E 7E 7E 8 AE 2 8F 2 AE 7E	9F 00149 9A 0014C	MOVZBL	10SB #114, -(SP)	
			7E	04 00154 50 00154	CLRL	-(SP)	
		68 57 07 57 00 7E	0C 50 57	DO 00159	CLRL CALLS MOVL BLBC MOVZWL	RO, STATUS STATUS RS	0504
		57 00	)8 AE 57	3C 0015F E8 00163	MOVŽUL	IOSB, STATUS STATUS, 10\$	•
		7E 000000	00G 8F	9A 0014C 3C 00150 D4 00154 FB 00156 D0 00159 E9 0015C 3C 0015F E8 00163 7D 00166 8\$: DD 00169 31 0016F 9\$: 91 00172 10\$:	BLBS MOVQ PUSHL	CHANNEL, -(SP) -(SP) #12, SYSSQIOW RO, STATUS STATUS, 8\$ IOSB, STATUS STATUS, 10\$ STATUS, -(SP) #SET\$_READERR 18\$	0505 0506
		02	00F0 7 AE	7C 00147 9F 00149 9A 0014C 3C 00150 D4 00154 FB 00156 D0 00159 E9 0015C 3C 0015F E8 00163 7D 00166 DD 00169 31 00169 31 00172 12 00176 E0 00178 9B 0017D D0 00182 DD 00187	BRW CMPB BNEQ	HEADER+7, #2	0513
	21 45 E0 E4	AE AD	05	E0 00178	BBZ	118 #5, HEADER+53, 118	0514
	£4	AD 000000	26 05 05 04 06 06 8f	12 00176 E0 00178 9B 0017D D0 00182 DD 00187	MOVZBW MOVL PUSHL	#5, HEADER+53, 118 3(R6), DESC 4(R6), DESC+4 #SET\$_NOTDIR	0514 0517 0518 0519

				16-Sep-1 14-Sep-1	984 00:59 984 12:09	:34	Page (7)
	6A	00A	9F 0011 1 DD 0019 F DD 0019 4 FB 0019	92 98 98	PUSHAB PUSHL PUSHL CALLS BRW	DESC #1 #SET\$ WRITEERR #4 LIBSSIGNAL 17\$	0513
17 . E8 EC 42	AD AD AE	24 AI	6 E1 001	9E 118: AO AC B1	CLRL BBC MOVL MOVAB MOVW	PTR #4, SETFILESFLAGS, 128 #262176, ATR RECATTR, ATR+4 VRSN_VALUE, RECATTR+30	0513 0530 0532 0540 0541 0542 0543
18	69 9E	EA AD4	0 7F 0011 5 B0 001	89 88 128: 86 63	INCL BBC PUSHAQ MOVW	PTR #3, SETFILESFLAGS, 138 ATR+2[PTR] #21, a(SP)+	0543 0546 0552
	9E	ES AD4	4 BU UU11	LA	MOVW PUSHAQ MOVW PUSHAQ	#21, a(SP) + ATR[PTR] #4, a(SP) + ATR+4[PTR]	0553
	9E	000000006 00	0 9E 0011	01	INCL	UIC_VALUE, a(SP)+ PTR	0554
		E8 AD4	0 7F 0011	DA 138: DC EO	BEQL PUSHAQ CLRL	17\$ ATR[PTR] a(SP)+	0561
		71	D 9F 0011 F 7C 0011	7	CLRL PUSHAB CLRQ	-(SP) ATR -(SP)	0569
		E8 A1 71 71 28 A1 30 2C A1 71	D 9F 0011 E 7C 0011	B	CLRL PUSHAB CLRQ	-(SP) DESC -(SP)	•
	7E	28 AI 36 20 AI	9F 0011 6 DD 0011 E 3C 0011	F 3	PUSHAB PUSHL MOVZWL	10SB #54 CHANNEL, -(SP)	8 8 8
				9 R	CLRL CALLS MOVL	-(SP)	
	68 57 07 57	08 A	0 DO 0011 7 E9 0020 5 3C 0020 7 E8 0020 7 7D 0020	01	BLBC	STATUS, 148 10SB, STATUS	0570
000000006	12 7E 00	000000006 81	7 E8 0020 7 7D 0020 F DD 0020	110	BLBS MOVQ PUSHL CALLS	RO, STATUS STATUS, 14\$ IOSB, STATUS STATUS, 15\$ STATUS, -(SP) #SET\$_WRITEERR #3, FILE_ERROR	0571 0572
0E	69	D8 At	D 9F 0022	10 158:	BRB BBC PUSHAB PUSHL	16\$ #2, SETFILESFLAGS, 16\$ DIR_DESC	0574 0575
	6A	000000006 81 00 71	DD 002 DD 002 FB 002 7C 002	6 20 25 16\$:	PUSHL CALLS CLRQ	#SETS MODIFIED #3. LIBSSIGNAL -(SP)	0579
		0. 71 71 71 EO AL 71 28 AL	FB 002 7C 002 7C 002 7C 002 04 002 9F 002	55	CLRQ CLRL PUSHAB	-(SP) -(SP) DESC	
		28 AI	9f 002	58 5A	CLRQ PUSHAB PUSHL	-(SP) 10SB #52	•
	7E	2C AF	9D 002 3C 002 04 002	5F 4-3	MOVZWL	CHANNEL(SP) -(SP) #12. SYSSQIOW	
	6B 7E	04 A	E 3C 0024	8 178:	MOVZUL	CHANNEL, -(SP)	0585

0000000G	0.0				4
0000000	00 57 10 76	01 FB 0024C 50 D0 00253 57 EB 00256			0504
000000006	000000006 00 50	8F DD 0025C 03 FB 00262 188: 01 D0 00269 198: 04 0026C	PUSHL #SETS	CLOSEERR TLE_ERROR	0586 0589 0590

```
VAX-11 Bliss-32 V4.0-742
[CLIUTL.SRC]SETDIR.B32:1
                 0591
0592
0593
0594
0595
0596
ROUTINE get_dir (dir_desc) =
                              This routine is called to get each directory spec from the command line.
                              When there are no more directories, a value of FALSE is returned.
                 0598
                           BEGIN
                 0599
                 0600
                           MAP dir_desc : REF $BBLOCK;
                 0601
                 0602
                                 desc : $BBLOCK[dsc$c_s_bln],
                                                                                          ! General descriptor
                 0604
                                 endchar : BYTE,
                                                                                  End-of-directory character
                 0605
                                 eos,
                                                                                  End of string
                 0606
0607
                                ptr.
                                                                                  Pointer in string
                                str_ptr.
str_len.
                                                                                  Pointer to rest of string
Length of rest of string
                 0608
                 0609
                                 temp_string : VECTOR[namSc_maxrss,BYTE],
                                                                                         ! The temporary string
                 0610
                 0611
                                 status:
                 IF .setfile$flags[qual_quit]
THEN RETURN false;
                              Check here to see if a trailing ellipse is being treated. If so, then FILE_FAB[FAB$L_CTX] will be set to TRUE, and there's no need to search and see if such a trailing ellipse is present. However,
                              if the value is set to FALSE, then get a new directory spec.
                           IF NOT .file_fab[fab$l_ctx]
                                                                               ! If not processing an ellipse ! then get the next directory
                           THEN
                                 If NOT cli$get_value(%ASCID 'DIRECTORY', .dir_desc)
                                 THEN RETURN false:
                                file_fab[fab$l_fna] = .dir_desc[dsc$a_pointer];
file_fab[fab$b_fns] = .dir_desc[dsc$w_length];
                              Since this is a new entry, it must be checked for a trailing ellipse.
                                CH$MOVE( .dir_desc[dsc$w_length], .dir_desc[dsc$a_pointer],
                                                                                  Move this many chars
                                                                                  from the CLI area
                                                                                  To the temp string
                                            temp_string);
                                str_ptr = temp_string;
str_len = .dir_desc[dsc$w_length];
                                                                                  Set up pointer
                                                                                 and length.
                              Look for ellipses.
                                 WHILE NOT CH$FAIL(temp = CH$FIND_SUB(.str_len, .str_ptr, 3, UPLIT('...')))
                                 DO
                                      BEGIN
                                      str_ptr = .temp + 3;
                                                                               ! Update pointer
                                      str_len = .str_len - (.temp - .str_ptr) - 3;
```

VAX-11 Bliss-32 V4.0-742 ECLIUTL.SRCJSETDIR.832;1

```
After the final ellipse, check to see if it is at the end of the directory specification. If so, then change the context field of
                                  the fab, and insert an end bracket at the beginning of the ellipse.
                                    IF (.str_ptr EQL temp_string + .file_fab[fab$b_fns] -1)
THEN
                                          BEGIN

file fab[fab$l_ctx] = true;
(H$WCHAR(..str_ptr, .str_ptr - 3);
file fab[fab$l_fna] = temp_string;
file_fab[fab$b_fns] = .str_ptr - 3
                                                                                                       Show that there's a trailing ellipse
                                                                                                      Put the end bracket in place
                                                                                                       Set up FAB fields
                                                                                            - temp_string + 1;
                                          END:
                                    END
                                 If here, then the trailing ellipse has been processed, and this is the
                                 second time thru. Restore the original file name.
                              ELSE
                                    file_fab[fab$l_fna] = .dir_desc[dsc$a_pointer];
file_fab[fab$b_fns] = .dir_desc[dsc$w_length];
file_fab[fab$l_ctx] = false;
                                                                                                                  Original filename
                                                                                                                  Original length
                                                                                                                  Ellipse processed
                                    END:
Parse the input string
                              $NAM_INIT (NAM = file_rlf);
IF (.file_nam[nam$b_dev] NEQ 0)
                                                                                                                  Re-init the RLF
If a device was
                              THEN
                                                                                                                 specified, then
                                    file_fab[fab$l_dna] = .file_nam[nam$l_dev];
file_fab[fab$b_dns] = .file_nam[nam$b_dev];
                                                                                                               ! Make device sticky
                              IF NOT (status = $PARSE(FAB = file_fab))
                              THEN
                                    desc[dsc$w_length] = .file_fab[fab$b_fns];
desc[dsc$a_pointer] = .file_fab[fab$l_fna];
SIGNAL_STOP(set$_syntax,
                                                     1, desc, .status);
                                    END:
                                 Check the parsed string for legality, i.e. nothing after the directory
                              if (.file_nam[nam$b_name] NEQ 0 0
    .file_nam[nam$b_type] NEQ 1 0
    .file_nam[nam$b_ver] NEQ 1 )
                              THEN
                                    711
                   0704
                                    END:
```

```
0705
0706
0707
                            Check if a search list is used. If so SIGNAL, as search lists are not allowed (for devices) in this application.
                0708
0709
0710
0711
                          IF .file_nam[nam&v_search_list]
THEN
                              SIGNAL_STOP(set$_filspcsrch, 1, .dir_desc, set$_nosrchlst);
Determine what the directory terminator character was, and save it.
                          endchar = .(.file_nam[nam$l_dir] + .file_nam[nam$b_dir] - 1);
                            The directory string must now be analyzed and manipulated so that the
                            final directory entry becomes a file. First, initialize some pointers.
                         desc[dsc$w_length] = .file_nam[nam$b_esl] - 2;
desc[dsc$a_pointer] = .file_nam[nam$l_esa];
str_ptr = .desc[dsc$a_pointer];
str_len = .desc[dsc$w_length];
ptr = 0;
                          eos = .desc[dsc$a_pointer] + .desc[dsc$w_length] -1;
                            Look for wildcard ellipses
                          WHILE NOT CH$FAIL(temp = CH$FIND_SUB(.str_len, .str_ptr, 3, uplit('...')))
                          DO
                              BEGIN
                            Make PTR point to the beginning of the "...", and advance the string pointer to the character just past the "..."
                              str_len = .str_len - (.temp - .str_ptr) -3;
                              str_ptr = .temp + 3;
                              END:
                            If there was any occurrence of "...", point just past it.
                          If .ptr NEQ 0 THEN ptr = .ptr + 3;
                            find the last directory in the specification
                          WHILE NOT CH$FAIL( temp = CH$FIND_CH(.str_len, .str_ptr, '.'))
                          DO
                              BEGIN
                0754
0755
0756
0757
                            Make PTR point to the ".", and advance the string pointer to
                            the first character after the
                0758
0759
                               str_len = .str_len - (.temp - .str_ptr) - 1;
                0760
                               str_ptr = .temp + 1;
END;
                0761
```

```
VAX-11 Bliss-32 V4.0-742
[CLIUTL.SRC]SETDIR.B32;1
                               IF .ptr NEQ 0
772
773
774
775
776
777
                                     BEGIN
                   0766
0767
                                 If here, then either a trailing ellipse, or a final sub-directory was specified. If the pointer is at the bracket, then there is a trailing ellipse, in which case only a "e" is required.
778
779
                                     IF .ptr EQL .eos
780
781
782
783
784
785
786
787
788
789
791
793
794
797
798
803
804
805
808
809
                                           BEGIN
                                          CHSA_WCHAR(***, ptr);
ptr = .ptr + 1;
END
                                                                                            Stick an asterisk after the bracket.
                                                                                            Adjust the pointer.
                   0778
                                  If the pointer is inside the bracket, then the last directory name
                   0779
                                  must be moved out of the brackets.
                   0780
                   0781
                                    ELSE
                                           BEGIN
                                  Check to see if the directory is [main.sub] or [main...sub]
                                           IF .ptr EQLU .str_ptr
                                           THEN
                                                BEGIN
                                                                                          ! [main...sub] form
                                                str len = .eos - .ptr;
CH$MOVE(.str_len, .ptr, .ptr+1);
CH$WCHAR(.endchar, .ptr);
ptr = .ptr + .str_len + 1;
END ! end
                                                                                          ! end of [main...sub] processing
                                          ELSE
                                                BEGIN
                                                                                          ! [main.sub] form
                                                str len = .eos - .str_ptr;
CH$QCHAR_A(.endchar, ptr);
                                                ptr = .ptr + .str_len;
END:
                   0799
                                                                                          ! end of [main.sub] processing
                                          END:
                                    END
                                                                                          ! End of non-zero pointer stuff
                               ELSE
810
                                     BEGIN
                                  If the pointer is still zero, then there is either a wildcard, a main
                   0806
0807
                                 directory, or a [g,m] directory. In all such cases, a main directory of [000000] must be fabricated.
                   0808
                   0809
0810
0811
0812
0813
0814
0815
                                     status = CH$FIND_CH(.str_len, .str_ptr, ',');
                                                                                                                 ! Save for later
                                 Move the string out seven spaces and insert "000000]"
819
820
821
822
823
824
825
                                     str_ptr = .desc[dsc$a_pointer] + .file_nam[nam$b_dev] + 1;
                                     temp = CH$MOVE(.eos - .str.ptr .str.ptr + 7);
str.ptr = CH$MOVE(6, UPLITT'000000'), .str.ptr);
                                     CHSMOVE(1, endchar, .str_ptr);
                                      no comma was found, then all that is required is to update the
```

```
SETDIR
VO4-000
                                                                                                                                                     VAX-11 Bliss-32 V4.0-742
[CLIUTL.SRC]SETDIR.B32;1
                                            pointer.
     IF CHSFAIL(.status) THEN ptr = .temp
                                            Otherwise, it's a [g,m] directory. Convert it.
                                               ELSE
                                                      BEGIN
                           LOCAL tparse_block : $BBLOCK[tpa$k_length0];
                                                                                                                                       ! Define a TPARSE block
                                                      CH$fILL(0, tpa$k length0, tparse_block);
tparse_block[tpa$l_count] = tpa$k_count0;
                                                                                                                                        ! Zero it.
! Fill in size
                                                      tparse_block[tpa$l_stringent] = .eos - .str_ptr;
tparse_block[tpa$l_stringptr] = .str_ptr + 7;
IF NOT (status = lTb$tparse(tparse_block,
                                                                                                     dir_state,
dir_keys);
                                                      THEN SIGNAL_STOP(.status)
                                                      ELSE
                                                             BEGIN
                                                             LOCAL temp_desc : $BBLOCK[dsc$c_s_bln];
temp_desc[dsc$w_length] = 6;
temp_desc[dsc$a_pointer] = .str_ptr + 7;
If NOT (status = SYS$FAO($descriptor('!2(30W)'),
                                                                                                       temp_desc.
                                                                                                       temp_desc,
                                                                                                        .group,
                                                                                                         member))
                                                             THEN SIGNAL_STOP(.status)
ELSE ptr = .str_ptr + 14;
                                                             END;
                                                      END:
                                               END:
                                        ptr = CH$MOVE(4, UPLIT('.DIR'), .ptr);
file_fab[fab$b_fns] = .ptr - .desc[dsc$a_pointer];
file_fab[fab$l_fna] = .desc[dsc$a_pointer];
                                         RETURN true:
                                        END:
                                                                                                                              PSECT
                                                                                                                                           $PLIT$, NOWRT, NOEXE, 2
                                                                                 52 49 44
010E0009
00000000
                                                                                                                              .ASCII
                                                                                                                                           \DIRECTORY\<0><0><0>
17694729
                                                                   43
                                                                                                                              ADDRESS P. AAP
```

## SRMS\_PTR= FILE\_RLF .EXTRN SYSSPARSE

.PSECT	SCODES	NOWRT, 2
--------	--------	----------

											11.000	40064/NOWN / C	
					SE	FEC4	CEO	9E 51 009 1	00000 00002 00007 0000F 00012 00016	GET.	DIR: WORD	Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11 -316(SP), SP #1, SETFILESFLAGS, 25	: 0591
			03	0000000G	5E 00	03	CE 01	ξÌ	00007	16.	BBC	#1 SETFILESFLAGS, 28	0613
					56 03	000000006 000000006	AC 00	DO	00007	15: 25:	MOVL	DIR DESC. R6	0625 0622
					03	00	84	31	00010	-	BLBC BRW	DIR DESC. R6 FILE FAB+24, 3\$	:
						00000000	20	DD 9F	00020	38:	PUSHL	P.AAO	0625
				000000006	00		EF 02 50	FB E9	00028 0002F		CALLS	#2, CLISGET_VALUE	
				000000006	00 00 86 5A	04	A6	FB E D O 9 8 9 E C	00032		MOVI	4(R6), FILE FAB+44 (R6), FILE FAB+52 (R6), a4(R6), TEMP_STRING TEMP_STRING, STR_PTR (R6), STR_LEN #3, P.AAQ, STR_LEN, (STR_PTR) 58 #3, R3	0628 0629 0634 0637 0638 0642
		34	AE	04	86	34	A6 66 AE 66	58	00041		MOVB MOVC3 MOVAB MOVZWL MATCHC	(R6), 34(R8), TEMP_STRING	0634
	4.4		63	00000001		34	66		00048	10.	MOVZWL	(R6), STR_LEN	0638
	6A		57	00000000	£F		03	39 13	00045	45:	BEOL	5\$	0042
					53		03 53	D0	00059 0005C	58:	DECL		
					50		53 73 0F	3E	0005E		BEQL	-(R3), TEMP	
			53		5A 5A 57	03	AB 5B	3E 13 9E C3 9E 11	00063		MOVAB SUBL 3	3(R11), STR PTR TEMP, STR PTR, R3 -3(R3)[STR_LEN], STR_LEN	0645
			,,		57	FD A3	47	9E	00068		MOVAB BRB	-3(R3)ESTA_LENJ, STR_LEN	:
					50	000000006	00	94	00072	68:	MOVZBL	FILE_FAB+52, RO	0642
					50 50 50	33 AE	5A	9A 9E D1 12	0007E		MOVAB CMPL BNEQ	TEMP_STRING-1[RO], RO STR_PTR, RO	
				000000006	00 51		01	00	00020 00028 00028 00028 00034 00047 00048 00057 00063 00067 00068 00067 00088 00088 00088 00088		MOAF	STR_PTR, RO  8\$ #1, FILE FAB+24 -3(STR_PTR), R1 (STR_PTR), (R1) TEMP_STRING, FILE_FAB+44 TEMP_STRING, RO R1, RO R0, #1, FILE FAB+52	0656 0657
					61		AA 6A	90 90	0008A 0008E		MOVAB	-3(STR PTR), R1 (STR PTR), (R1)	2
				000000006	00	34 34	AE AE 51	9E 9E	00091		MOVB MOVAB MOVAB	TEMP_STRING, FILE_FAB+44	0658 0659
	00000	ററാട	00		00 50 50 01		51	62	00099 00090 000A0		SUBL 2 SUBB 3	R1, R0 R0, #1, FILE_FAB+52	•
	00000	0000	00	00000000			15	11	000A8	76.	BRB MOVL	8\$ 4(R6), FILE_FAB+44	0622 0668 0669 0670 0676
				00000000G	00	00000000	66	90 94 20	000B2		MOVB	(R6), FILE FAB+52	0669
0060	8F		00		6E	000000006	00	50	000BF	88:	CLRL MOVC5	FILE FAB+24 WO, (SP), WO, W96, \$RMS_PTR	0676
				00000000	EF	000000000	A6 66 00 EF 8F 00	80	000C6		MOVE	#24578, \$RMS_PIR	
					S <sub>0</sub>	00000000	00 12	9A 13	00004 0000B		MOVZBL	FILE_NAM+57, RO	0677
				00000000G 00000000G	00	00000000G	00 50	90	0000D		MOVE	FILE NAM+68, FILE_FAB+48	0680 0681 0683
				000000006		000000006 00	ÓŎ	0 D0 0 90 0 9f	000A0 000A8 000AA 000B2 000B9 000C6 000CB 000D4 000DB 000DB 000DB 000EF 000F5	98:	PUSHAB	HAB FILE_FAB	0683
				00000000	00 6E		50	DO	000fC		MOVE	RO, STATUS	

				16-Sep-1984 00:5 14-Sep-1984 12:0		Page 29
FB	AD AD	000000006	6E 00 6E	E8 000FF BLBS 98 00102 MOVZBW 00 0010A MOVL DD 00112 PUSHL 9F 00114 PUSHAB	FILE_FAB+52, DESC FILE_FAB+44, DESC+4 STATUS	0686 068 068 068
00000000	5 00	F8 007710FA 00000000G	01 8F 04	DD 00117 PUSHL DD 00119 PUSHL FB 0011F CALLS	DESC #1 #7803130 #4, LIBSSTOP FILE_NAM+59	0695
	01	000000006		95 00126 10\$: TSTB 12 0012C BNEQ 91 0012E CMPB	FILE_NAM+60, #1	0696
	01	00000000G	00	12 00135 BNEQ 91 00137 CMPB	118 FILE_NAM+61, #1	0697
F8 FC	AD AD 7E	000000006 000000006 0828 F8	00 8F	13 0013E BEQL 9B 00140 11\$: MOVZBW D0 00148 MOVL 3C 00150 MOVZWL 9F 00155 PUSHAB DD 00158 PUSHL	FILE FAB+44, DESC+4	0700 0701 0702
17 00000000	G 00	007710FA 00771352	8F 04 03 8F	DD 0015A PUSHL FB 00160 CALLS E1 00167 128: BBC DD 0016F PUSHL	#7803130 #4, LIB\$STOP #3, FILE_NAM+53, 13\$ #7803730	0709 071
00000000	5 00 50 50	0077134A 000000006	8F 04 00	DD 00177 PUSHL DD 00179 PUSHL FB 0017F CALLS 9A 00186 13\$: MOVZBL	R6 #1 #7803722 #4. LIB\$STOP FILE_NAM+58, R0	071
04 F8	AE	000000006 FF 000000006	AO 00	CO 0018D ADDL2 90 00194 MOVB 9B 00199 MOVZBW A2 001A1 SUBW2	FILE NAM+58, RO FILE NAM+72, RO -1(RO), ENDCHAR FILE NAM+11, DESC	072
F8 F8	AD AD 59	00000000G	00	A2 001A1 SUBW2 D0 001A5 MOVL D0 001AD MOVL	#2, DESC FILE NAM+12, DESC+4 DESC*4, R9	072 072
	5A 50 57		59 AD	DO DOTRI MOVI	PQ STP PTR	0724
			AD 50 58	B4 OOTER CIRL	RO, STR_LEN	072
57 00000000	56 EF	FF A	03	04 0018B CLRI 9E 0018D MOVAB 39 001C2 148: MATCHC	-1(RO)[R9], EOS #3, P.AAR, STR_LEN, (STR_PTR) 15\$	072 072 073
	53		03	9E 001BD MOVAB 39 001C2 148: MATCHC 13 001CB BEQL DO 001CD MOVL D7 001DO 158: DECL 3E 001D2 MOVAW	#3, R3 R3	•
	58		73	3E 001D2 MOVAW 13 001D5 BEQL	-(DE) TEMP	
53	58 5A 57 5A		5B 5B	00 00107 MOVL C3 0010A SUBL3 9E 0010E MOVAB	TEMP, PTR TEMP, STR_PTR, R3	0738 0739
	57 5A	03	03333728895583358835883588358835883588358835883	9E 001E3 MOVAB 11 001E7 BRB	16\$ TEMP, PTR TEMP, STR PTR, R3 -3(R3)[STR LEN], STR LEN 3(R11), STR PTR 14\$	0740 0731 0746
			58 03	05 001E9 168: TSTL 13 001EB BEQL	178	0746
6A	58 57		05 SE 02	CO 001ED 3A 001F0 17\$: LOCC 12 001F4 BNE9	#3, PTR #46, STR_LEN, (STR_PTR) 18\$ R1 R1, TEMP	0751
	58		51	04 001F6 CLRL 00 001F8 18\$: MOVL	R1 R1, TEMP	e 6 9

SETD1R V04-000				16-Sep-1984 00:59:34 VAX-11 Bliss-32 V4.0-742 14-Sep-1984 12:09:06 [CLIUTL.SRC]SETDIR.B32;1	Page 30 (8)
		53	58 58 58 57 FF A347 5A 01 A8	13 001FB BEQL 19\$ 00 001FD MOVL TEMP, PTR C3 00200 SUBL3 TEMP, STR PTR, R3 9E 00204 MOVAB -1(R3)[STR LEN], STR_LEN 9E 00209 MOVAB 1(R11), STR_PTR 11 0020D BRB 17\$ 05 0020F 19\$: TSTL PTR	0758 0759 0760 0751 0763
			56 58	13 00211 BEQL 228 01 00213 CMPL PTR, EOS	0771
			88 SA	06 00218 INCL PTR 90 0021A MOVB #42. (PTR)+	0774
			5A 58	11 00210 BRB 24\$ D1 0021F 20\$: CMPL PTR, STR_PTR	0771 0786
	01	57 A8	56 68 68 68 04 AE 58	05 0020F 198: TSTL PTR 13 00211  D1 00213  CMPL PTR, EOS 12 00216  BNEQ 20\$  D6 00218  INCL PTR 90 0021A  MOVB #42, (PTR)+ 11 0021D  BRB 24\$  D1 0021F 20\$: CMPL PTR, STR_PTR 12 00222  C3 00224  SUBL3 PTR, EDS, STR_LEN 28 00228  MOVC3 STR_LEN, (PTR), 1(PTR) 90 0022D  MOVB ENDCHAR, (PTR) 9E 00231  MOVAB 1(STR_LEN)[PTR], PTR	0789 0790 0791 0792 0786 0796 0797 0798 0763
		57	56 88 58 58 58 57	C\$ 00238 21%: SUBL3 STR PTR, EOS, STR_LEN 90 0023C	0796 0797 0798 0763
		6A	57 20 02	3A 00245 228: LOCC #44, STR_LEN, (STR_PTR) 12 00249 BNEQ 238 04 0024B CLRL R1	0809
	07	50 AA	6E 50 0000000006 00 5A 01 A049 56 6A 50 5B 53 6A 04 AE	DO 0024D 23%: MOVL R1, STATUS 9A 00250 MOVZBL FILE NAM+57, R0 9E 00257 MOVAB 1(R0)[R9], STR PTR C5 0025C SUBL3 STR PTR, EOS, R0 28 00260 MOVC3 R0, (STR PTR), 7(STR PTR)	0813 0814
		6A 00000000°	5B 53 Ef 06	DO 00265 MOVL R3, TEMP 28 00268 MOVC3 #6, P.AAS, (STR_PTR) DO 00270 MOVL R3, STR_PTR 90 00273 MOVB ENDCHAR, (STR_PTR)	0815
			5A 6A 04 6E 05 58	00 00270 MOVL R3, STR_PTR 90 00273 MOVB ENDCHAR, (STR_PTR) 05 00277 TSTL STATUS 12 00279 BNEQ 25\$ 00 0027B MOVL TEMP, PTR 11 0027E 24\$: BRB 28\$	0816 0821
24		00	6E 10 AE	2C 00280 25%: MOVC5 #0, (SP), #0, #36, TPARSE_BLOCK	0830
	18	AE 10	56 5A	DO 00287 MOVL #8, TPARSE BLOCK C3 0028B SUBL3 STR PTR, EDS, TPARSE BLOCK+8 9E 00290 MOVAB 7(RTO), R3	0831 0833 0834
		10	53 07 AA 000000000 EF 000000000 EF	DO 00294 MOVL R3, TPARSE_BLOCK+12 9F 00298 PUSHAB DIR_KEYS 9F 0029E PUSHAB DIR_STATE 9F 002A4 PUSHAB TPARSE BLOCK	0835
		00000000G 08 0C	00 03 6E 50 2D 6E AE 06	00285 D0 00287 C3 0028B SUBL3 STR PTR, EDS, TPARSE_BLOCK+8 9E 00290 MOVAB 7(RTO), R3 D0 00294 MOVL R3, TPARSE_BLOCK+12 PF 00298 PUSHAB DIR_KEYS PF 0029E PUSHAB DIR_STATE PF 002A4 PUSHAB TPARSE_BLOCK CALLS //3, LIB\$TPARSE D0 002AE MOVL R0, STATUS E9 002B1 BLBC STATUS, 26\$ MOVU #6, TEMP_DESC D0 002B8 MOVL R3, TEMP_DESC+4 DD 002C2 PUSHAB TEMP_DESC	0842
		00	000000006 00 000000006 00 10 AE	BO 002B4 MOVW #6, TEMP_DESC DO 002B8 MOVL R3, TEMP_DESC+4 DD 002BC PUSHL MEMBER DD 002C2 PUSHL GROUP 9F 002C8 PUSHAB TEMP_DESC	0842 0843 0848 0847

SETDIR VO4-000							1	M 2 6-Sep- 4-Sep-	1984 00:59 1984 12:09	:34	VAX-11 Bliss-32 V4.0-742 CCLIUTL.SRCJSETDIR.B32;1	Pag	e 31 (8)
00000000	06 00	000000006 000000006	00 6E 0B 00 58 88 58 00 50	00000000°	AEF500EE100AAF9901	9FFD8DB19D3000444	002CB 002CE 002CB 002CB 002CE 002CE 002CE 002FF 003CE	26\$: 27\$: 28\$:	PUSHAB PUSHAB CALLS MOVL BLBS PUSHL CALLS BRB MOVAB MOVL SUBB3 MOVL RET CLRL RET	STATE STATE STATE	SYSSFAO Status		0849 0850 0854 0855 0856 0858 0859

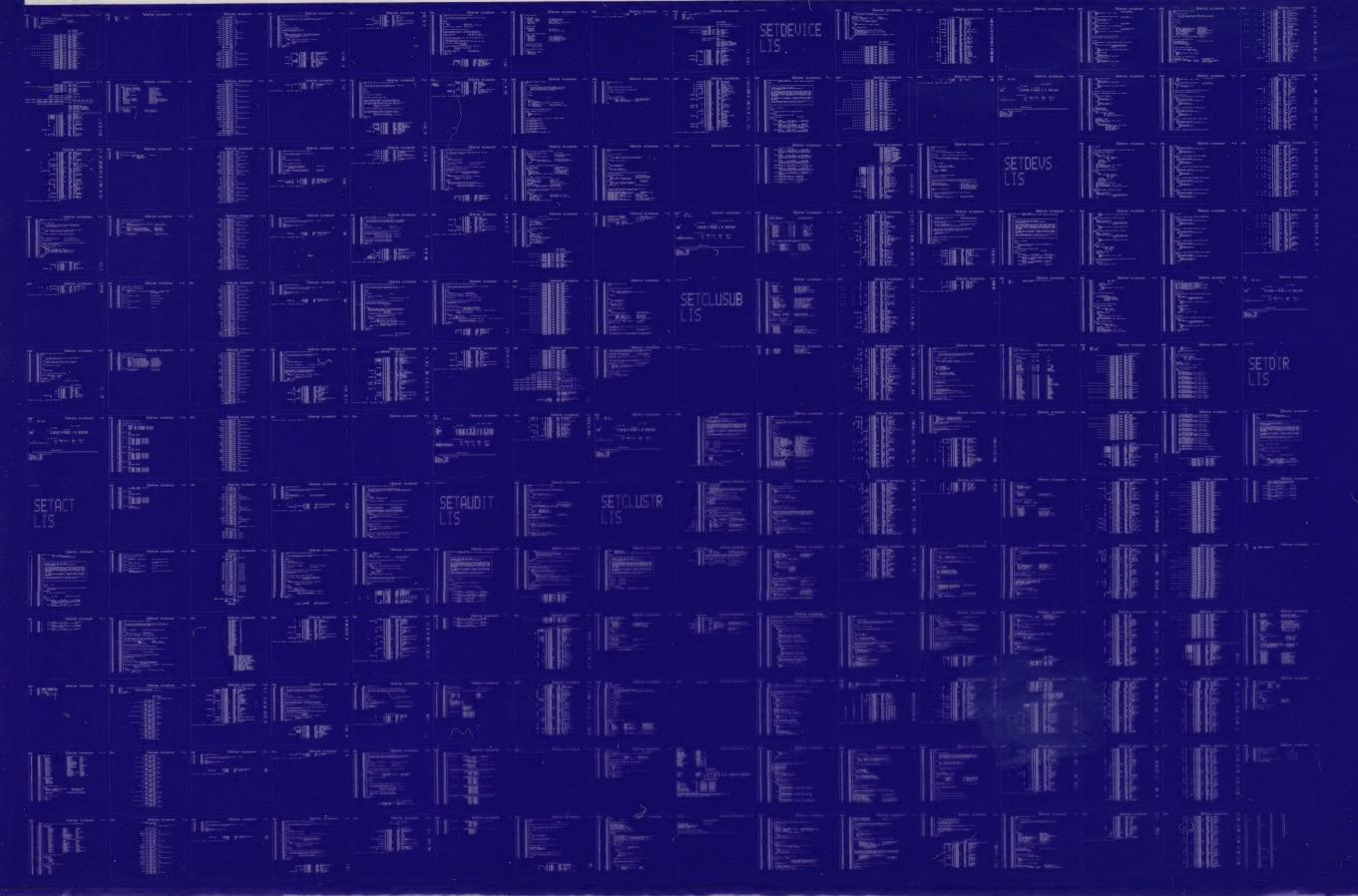
; Routine Size: 781 bytes, Routine Base: \$CODE\$ + 03CF

SE VO	TD1R 4-000					N 2 16-Sep-198 14-Sep-198	4 00:59:34	VAX-11 Bliss-32 V4.0-742 CCLIUTL.SRCJSETDIR.B32;1
:	868 869	0860 1 END 0861 0 ELUDOM						
							.EXTRN LIBS	SIGNAL, LIBSSTOP
:			PSE	CT SUMMARY				
	Name		Bytes			Attributes		
	SOWNS LIBSKEYOS LIBSSTATES SCODES SPLITS		100 16 1756 208	NOVEC, WRT NOVEC, NOWRT NOVEC, NOWRT NOVEC, NOWRT	RD .N. RD .N. RD .N.	OEXE, NOSHR, EXE, SHR, EXE, SHR, EXE, NOSHR, OEXE, NOSHR,	LCL, REL, LCL, REL, LCL, REL, LCL, REL,	CON, NOPIC, ALIGN(2) CON, PIC, ALIGN(1) CON, PIC, ALIGN(1) CON, NOPIC, ALIGN(2) CON, NOPIC, ALIGN(2)
			Library St	atistics				
	File			Total	Symbols Loaded	Percent	Pages Mapped	Processing Time
:	\$255\$DUA28	[SYSLIB]LIB.L32;1 [SYSLIB]TPAMAC.L3	2;1	18619 42	109 18	42	1000	00:01.7 00:00.1
			co	MMAND QUALIF	IERS			
;	BLISS/	CHECK=(FIELD,INITI	AL,OPTIMIZ	E)/LIS=LIS\$:	SETDIR/C	BJ=OBJ\$:SETD	IR MSRCS:SET	DIR/UPDATE=(ENHS:SETDIR)
	Size: Run Time: Elapsed Time: Lines/(PU Mir Lexemes/(PU-M Memory Used: Compilation (	1756 code + 324 00:32.7 01:40.0 1: 1581 1in: 25423 274 pages Complete	data bytes					

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